3-month summary

- Overall, the chance of the winter being cold is lower than normal
- However, this doesn't preclude some cold spells and related impacts
- There is an increased chance of the winter overall being wetter and windier than normal
- Stormy conditions, and impacts from high winds, are more likely than normal

3-month likelihood of impact

Temperature

5%	50%	45%
chance the season will be COLD	chance the season will be NEAR AVERAGE	chance the season will be MILD
0.3× the normal chance	0.8× the normal chance	2.3× the normal chance

Precipitation

5%	65%	30%
chance the season will be DRY	chance the season will be NEAR AVERAGE	chance the season will be WET
0.3× the normal chance	1.1× the normal chance	1.5× the normal chance

Wind speed

5%	60%	35%
chance the season will be CALM	chance the season will be NEAR AVERAGE	chance the season will be WINDY
0.3× the normal chance	1.0× the normal chance	1.8× the normal chance

1-month summary

- The chance of a cold month is close to normal
- Nevertheless, this level of likelihood is greater than typically seen in recent years
- There is a slight increase in the chance of a dry month compared to normal
- There is an increased chance of a calm December compared to normal

1-month likelihood of impact

Temperature

20% chance the month will be COLD	55% chance the month will be NEAR AVERAGE	25% chance the month will be MILD
1.0× the normal chance	0.9× the normal chance	1.3× the normal chance

Precipitation

25% chance the month will be DRY	60% chance the month will be NEAR AVERAGE	15% chance the month will be WET
1.3× the normal chance	1.0× the normal chance	0.8× the normal chance

Wind speed

30% chance the month will be CALM	50% chance the month will be NEAR AVERAGE	20% chance the month will be WINDY
1.5× the normal chance	0.8× the normal chance	1.0× the normal chance

Understanding the Outlook

The Outlook uses 3 categories for possible UK temperature, precipitation and wind speed in the next 1 and 3 months:

COLD, NEAR AVERAGE and MILD for temperature
WET, NEAR AVERAGE and DRY for precipitation
CALM, NEAR AVERAGE and WINDY for wind speed

These are linked to observed UK conditions in past years. The NEAR AVERAGE category represents typical conditions for the period and has a normal likelihood of 60%. The higher and lower categories represent more unusual conditions that are more likely to produce impacts. Each has a normal likelihood of 20%.

The Outlook shows how the chances of occurrence of the categories differ from normal, based on knowledge of expected global meteorological patterns. It does not identify which category will actually occur.

Same 3-month period over the last 10 years

2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24
NEAR AVERAGE	MILD	NEAR AVERAGE	NEAR AVERAGE	MILD	MILD	NEAR AVERAGE	MILD	NEAR AVERAGE	MILD
NEAR AVERAGE	WET	DRY	NEAR AVERAGE	DRY	WET	NEAR AVERAGE	NEAR AVERAGE	NEAR AVERAGE	WET
NEAR AVERAGE	WINDY	NEAR AVERAGE	NEAR AVERAGE	CALM	WINDY	NEAR AVERAGE	NEAR AVERAGE	NEAR AVERAGE	NEAR AVERAGE

Same 1-month period over the last 10 years

2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
NEAR AVERAGE	MILD	MILD	NEAR AVERAGE	MILD	NEAR AVERAGE	NEAR AVERAGE	MILD	COLD	MILD
NEAR AVERAGE	WET	DRY	NEAR AVERAGE	NEAR AVERAGE	NEAR AVERAGE	NEAR AVERAGE	NEAR AVERAGE	NEAR AVERAGE	WET
NEAR AVERAGE	WINDY	NEAR AVERAGE	NEAR AVERAGE	NEAR AVERAGE	NEAR AVERAGE	NEAR AVERAGE	NEAR AVERAGE	NEAR AVERAGE	NEAR AVERAGE

Outlook in context

Drivers of UK weather for November to January
Global weather patterns can affect UK weather during the coming season and their influence acts to shift the chances of the categories in the Outlook. Drivers relevant to the current Outlook are:
• The warming of UK climate consistent with wider global warming trends.
• Below average (La Niña like) sea surface temperatures in the tropical Pacific Ocean increase the likelihood of northerly winds early in this period and westerly winds later.
• A negative IOD (Indian Ocean Dipole), which reinforces the above effects in early winter.
• A westerly phase of the QBO (Quasi Biennial Oscillation) in the lower stratosphere, that increases the likelihood of westerly winds from the Atlantic.
• An active MJO (Madden-Julian Oscillation), which increases the chances of northerly or easterly winds during December.

Long-range weather predictions
The Met Office and other prediction centres around the world routinely produce long-range forecasts of conditions in the months ahead. During December, there is a moderate increase in the likelihood of pressure to be higher than average close to, or to the west of the UK, this increasing the likelihood of northerly or northwesterly winds and drier than normal conditions. Through January and February, lower than normal pressure becomes more likely to the north with above normal pressure across or near to the south of the UK. This favouring westerly winds and a reduced likelihood of cold conditions.

Impacts
Consistent with our warming climate there is only a small chance of the period being cold. However, this does not preclude the possibility of some cold spells and related impacts. The chances of a the winter being wet are greater than normal and given the time of year, spells of wet weather can be expected at any time. The wettest conditions likely over northern and western parts of the UK, especially during January and February. The likelihood of the period being windy as a whole is also greater than normal. Stormy periods and impacts from rainfall and high winds are possible throughout, but especially during January and February.

Outlook compared to normal likelihood

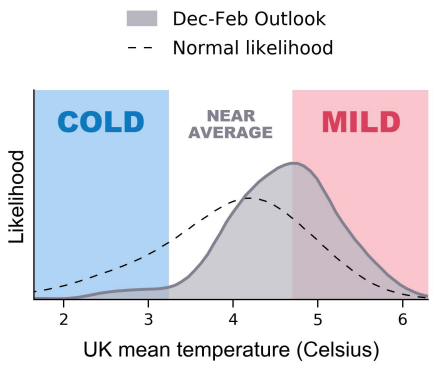
The curves below show the likelihood of the 1- and 3-month average temperature, precipitation and wind speed taking specific values. In each case:

- The dashed curve shows the normal likelihood based on how often each value has been recorded in past years
- The solid curve shows the current likelihood based on the Outlook for this year

The differences in these curves show how the probabilities for the coming periods differ compared to past years. Where the solid curve (corresponding to this year's Outlook) lies above the dashed curve (normal likelihood), the temperature, precipitation or wind speed at that point has a greater-than-normal likelihood of occurring. Likewise, wherever it is below the dashed curve, the likelihood of those values is less than normal.

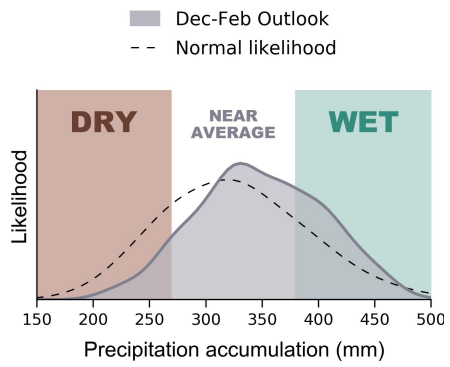
A shift of the solid curve to the left of the dashed curve indicates an increase in the chances of below-average temperature, rainfall or winds. A shift to the right, meanwhile, indicates increased chances of above-average values.

3-month temperature Outlook compared to normal



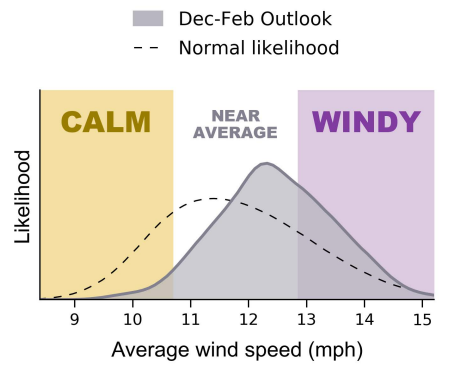
Likelihood leans towards mild

3-month precipitation Outlook compared to normal



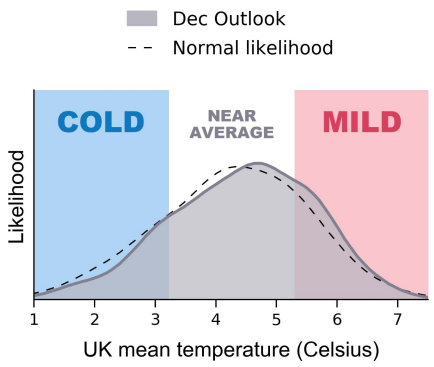
Lean towards wet

3-month wind speed Outlook compared to normal



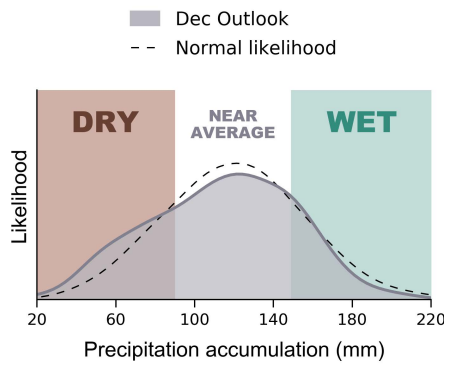
Lean towards windy

1-month temperature Outlook compared to normal



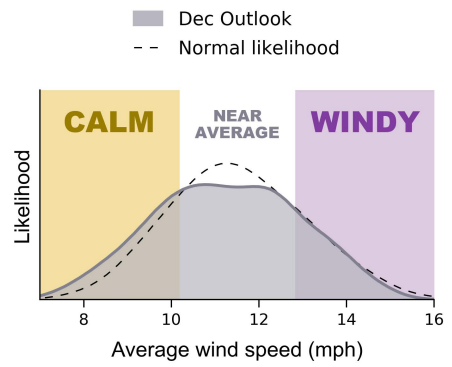
Likelihood leans slightly towards mild

1-month precipitation Outlook compared to normal



Slight lean towards dry

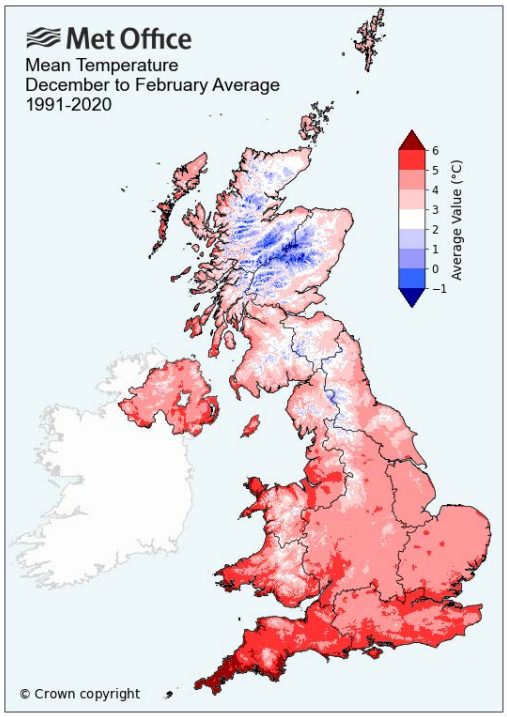
1-month wind speed Outlook compared to normal



Slight lean towards calm

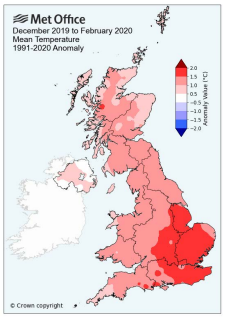
Long-term average temperatures (3-month)

This page shows the long-term average temperatures across the UK applicable to the 3-month Outlook period.

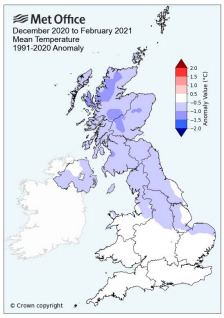


Average temperatures for December - February based on observations of past years.

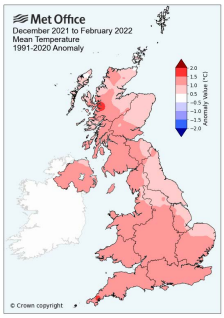
Last 5 years temperatures, difference from average (3-month)



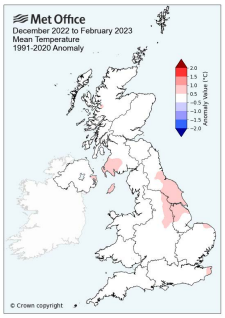
Dec - Feb 2019/20



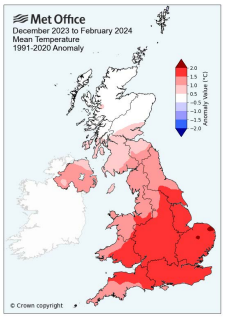
Dec - Feb 2020/21



Dec - Feb 2021/22



Dec - Feb 2022/23



Dec - Feb 2023/24

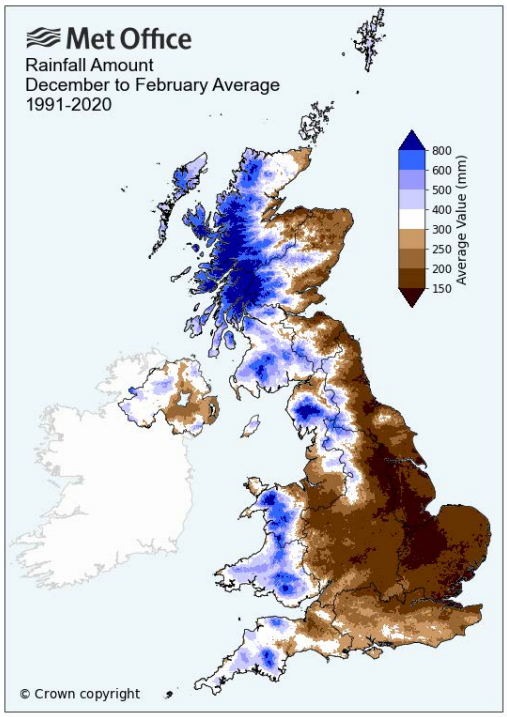
Anomaly (°C)

< -2.0	-2.0 to -1.5	-1.5 to -1.0	-1.0 to-0.5	-0.5 to 0.5	0.5 to 1.0	1.0 to 1.5	1.5 to 2.0	> 2.0

These maps show how December - February temperatures in the last five years differed from the long-term average temperatures shown above in the upper panel. Pink and red colours indicate warmer-than-average conditions while blue shades indicate cooler-than-average conditions. Detailed information on the climate of the UK is available at www.metoffice.gov.uk/climate.

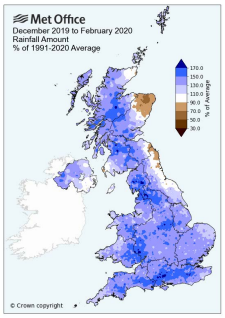
Long-term average precipitation (3-month)

This page shows the long-term average precipitation across the UK applicable to the 3-month Outlook period.

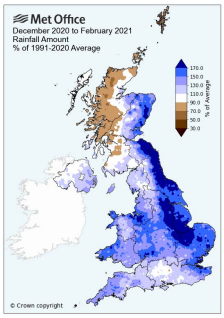


Average precipitation for December - February based on observations of past years.

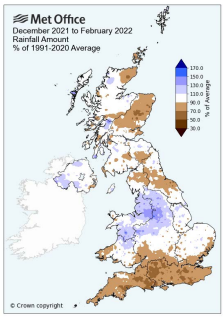
Last 5 years precipitation, difference from average (3-month)



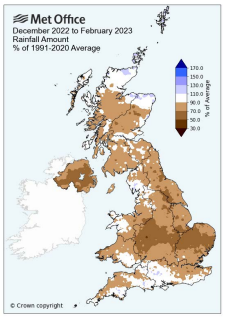
Dec - Feb 2019/20



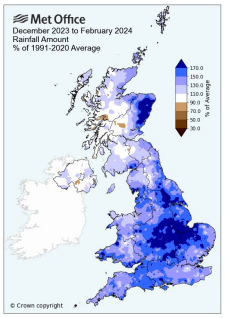
Dec - Feb 2020/21



Dec - Feb 2021/22



Dec - Feb 2022/23



Dec - Feb 2023/24

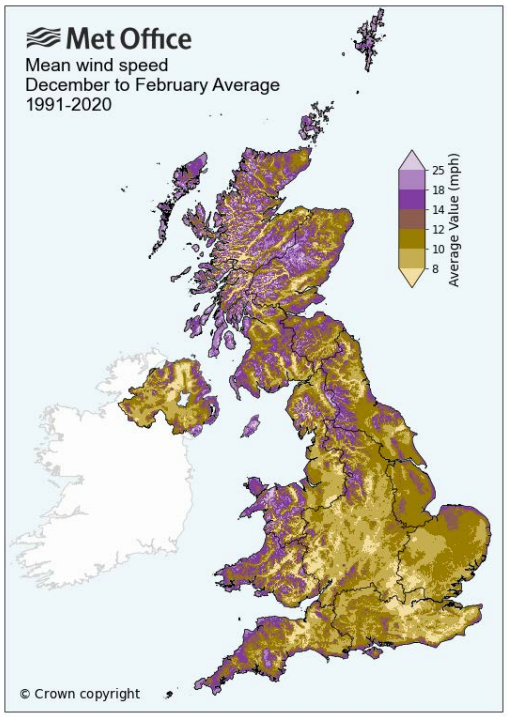
% of average

< 30	30 to 50	50 to 70	70 to 90	90 to 110	110 to 130	130 to 150	150 to 170	> 170

These maps show how December - February precipitation in the last five years differed from the long-term average precipitation shown above in the upper panel. Brown colours indicate drier-than-average conditions while blue shades indicate wetter-than-average conditions. Detailed information on the climate of the UK is available at www.metoffice.gov.uk/climate.

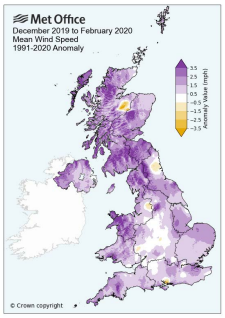
Long-term average wind speed (3-month)

This page shows the long-term average wind speed across the UK applicable to the 3-month Outlook period.

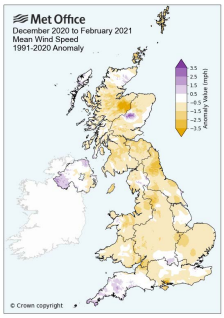


Average wind speed for December - February based on observations of past years.

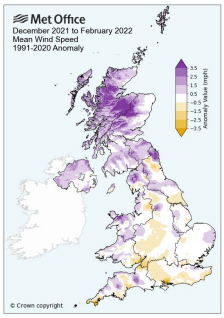
Last 5 years wind speed, difference from average (3-month)



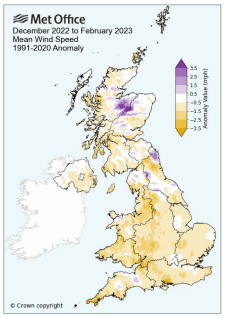
Dec - Feb 2019/20



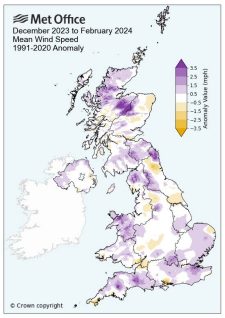
Dec - Feb 2020/21



Dec - Feb 2021/22



Dec - Feb 2022/23



Dec - Feb 2023/24

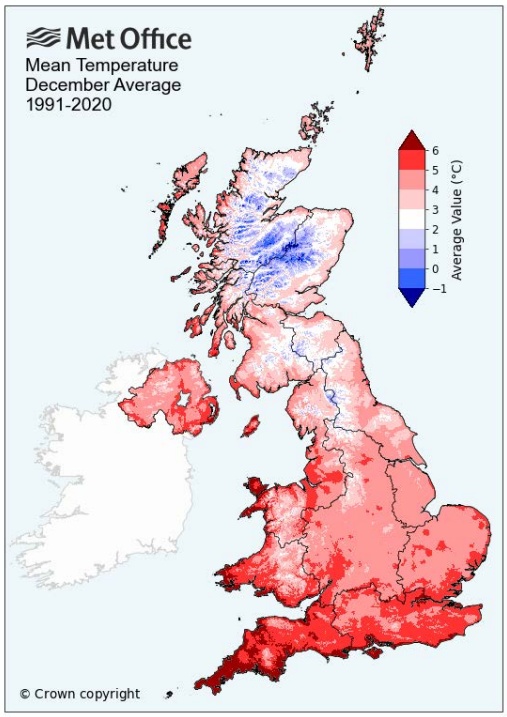
Anomaly (mph)

< -3.5	-3.5 to -2.5	-2.5 to -1.5	-1.5 to -0.5	-0.5 to 0.5	0.5 to 1.5	1.5 to 2.5	2.5 to 3.5	> 3.5

These maps show how December - February wind speed in the last five years differed from the long-term average wind speeds shown above in the upper panel. Yellow colours indicate calmer-than-average conditions while purple shades indicate windier-than-average conditions. Detailed information on the climate of the UK is available at www.metoffice.gov.uk/climate.

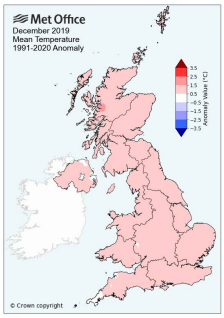
Long-term average temperatures (1-month)

This page shows the long-term average temperatures across the UK applicable to the 1-month Outlook period.

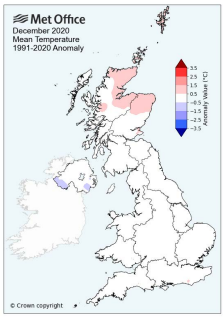


Average temperatures for December based on observations of past years.

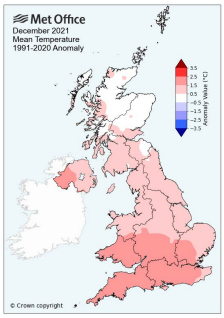
Last 5 years temperatures, difference from average (1-month)



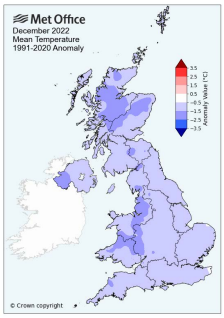
Dec 2019



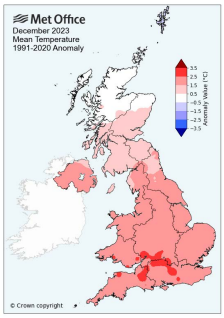
Dec 2020



Dec 2021



Dec 2022



Dec 2023

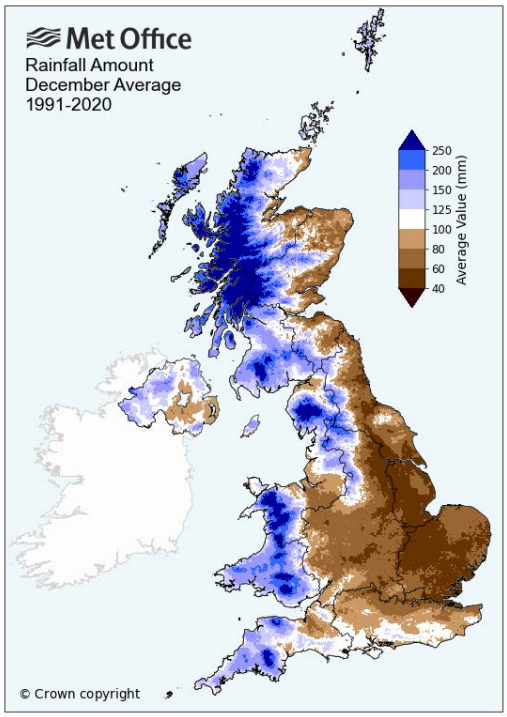
Anomaly (°C)

< -3.5	-3.5 to -2.5	-2.5 to -1.5	-1.5 to -0.5	-0.5 to 0.5	0.5 to 1.5	1.5 to 2.5	2.5 to 3.5	> 3.5

These maps show how December temperatures in the last five years differed from the long-term average temperatures shown above in the upper panel. Pink and red colours indicate warmer-than-average conditions while blue shades indicate cooler-than-average conditions. Detailed information on the climate of the UK is available at www.metoffice.gov.uk/climate.

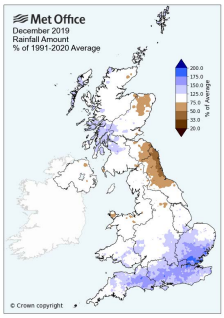
Long-term average precipitation (1-month)

This page shows the long-term average precipitation across the UK applicable to the 1-month Outlook period.

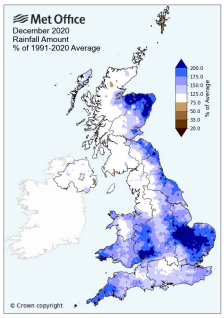


Average precipitation for December based on observations of past years.

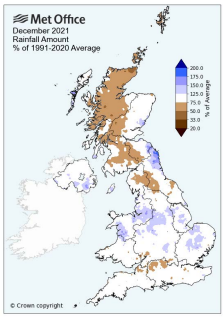
Last 5 years precipitation, difference from average (1-month)



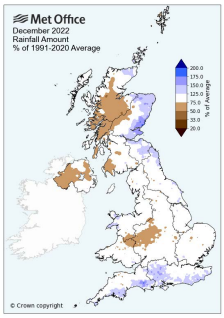
Dec 2019



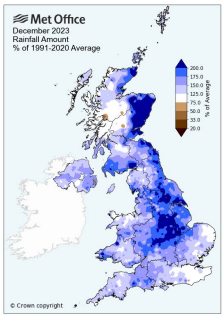
Dec 2020



Dec 2021



Dec 2022



Dec 2023

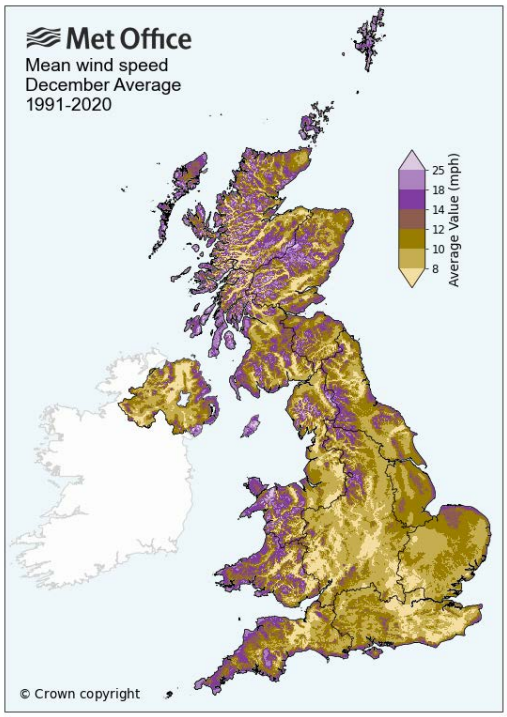
% of average

< 20	20 to 33	33 to 50	50 to 75	75 to 125	125 to 150	150 to 175	175 to 200	> 200

These maps show how December precipitation in the last five years differed from the long-term average precipitation shown above in the upper panel. Brown colours indicate drier-than-average conditions while blue shades indicate wetter-than-average conditions. Detailed information on the climate of the UK is available at www.metoffice.gov.uk/climate.

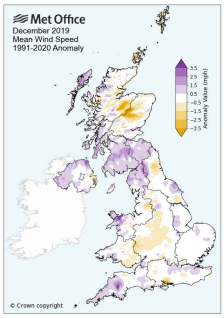
Long-term average wind speed (1-month)

This page shows the long-term average wind speed across the UK applicable to the 1-month Outlook period.

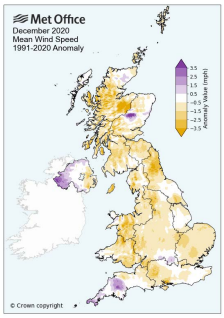


Average wind speed for December based on observations of past years.

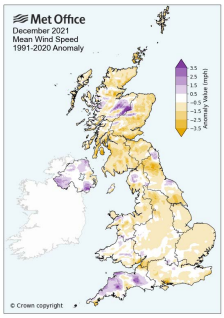
Last 5 years wind speed, difference from average (1-month)



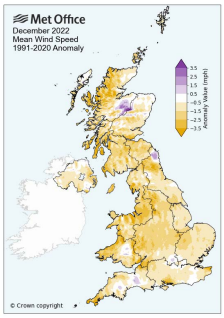
Dec 2019



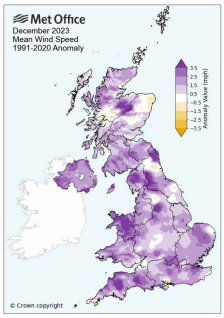
Dec 2020



Dec 2021



Dec 2022



Dec 2023

Anomaly (mph)

< -3.5	-3.5 to -2.5	-2.5 to -1.5	-1.5 to -0.5	-0.5 to 0.5	0.5 to 1.5	1.5 to 2.5	2.5 to 3.5	> 3.5

These maps show how December wind speed in the last five years differed from the long-term average wind speeds shown above in the upper panel. Yellow colours indicate calmer-than-average conditions while purple shades indicate windier-than-average conditions. Detailed information on the climate of the UK is available at www.metoffice.gov.uk/climate.

Q&As

Q. What is the point of the Outlook, who is it meant for?
A. This Outlook is produced for planners in government and business who make risk-based decisions. These users are aware of the complexities of this type of outlook and will include those factors in their decision-making process.

Q. How did you decide on the Outlook? What are the main factors affecting it?
A. It is based on information from observations, several numerical prediction systems and expert judgement. See the 'Outlook in Context' section of the Outlook for more details.

Q. Is the Outlook for the whole country?
A. The Outlook is for the average of conditions over the UK as a whole. Regional deviations from the UK-average can occur. For example, average UK precipitation can result from below-average rainfall for the northwest and above-average for the southeast.

Q. How confident are you in this Outlook?
A. The percentages in the 'Likelihood of Impact' sections of the Outlook give the level of confidence.

Q. Does the Outlook mean there is an increased chance of storms and flooding?
A. Whilst the likelihood of the period being windy as a whole is greater than normal the Outlook cannot specify the severity, duration, or timings of specific events such as storms. The likelihood of the Outlook period being wet is similar to normal, however, given the time of year, spells of wet weather are still to be expected. It is therefore it is important to keep up to date with the latest warnings and forecasts and monitor the risk of flooding in your area by using the warnings on the Environment Agency, SEPA, NI Direct and Natural Resources Wales websites.

Q. Does this Outlook mean we will not see any more snow? What about a white Christmas?
A. The Outlook concerns weather themes over the whole month or 3-month period and cannot tell us whether or not, or indeed when, we might have snow. Broadly speaking, milder UK winters have less snow, but it is still possible to have cold, snowy periods embedded within winters that are mild overall. Information about the Christmas period can be obtained nearer the time from our shorter-range forecasts on the website https://www.metoffice.gov.uk/

About the Outlook

The Outlook presented here is for United Kingdom as a whole and is based on information from observations, several numerical prediction systems and expert judgement. It is updated monthly to reflect the latest information on global weather patterns and their effect on the UK. The Outlook is designed to be used in conjunction with shorter-range forecasts – detailed weather forecast information is available on the Met Office website.

In this product, temperature refers to the average of daytime maxima and night-time minima. Wind speed refers to the average wind speed at a height of 10 metres. All numerical values relate to averages (temperature, wind speed) or totals (precipitation – rain, sleet, snow and hail) over 1 or 3 months, which are further averaged over the UK land area as a whole. Normal likelihood and long-term averages are established using the period 1991-2020.

Find out more

- UK 3-month Outlook user guidance page:
  https://www.metoffice.gov.uk/services/government/contingency-planners/user-guidance/user-guidance
- Explainers on climate drivers (such as the El Niño Southern Oscillation and North Atlantic Oscillation) that influence seasonal forecasts and the impacts they can have on UK weather:
  https://www.metoffice.gov.uk/services/government/contingency-planners/seasonal-forecasts-and-climate-drivers-resources
- Contingency planners page:
  https://www.metoffice.gov.uk/services/government/contingency-planners/index

Contact us

Website:
www.metoffice.gov.uk

Email:
enquiries@metoffice.gov.uk

Provide your feedback

We would like to hear your feedback on the UK 3-month Outlook to understand how it is being used. Please fill in the short form using this link or QR code to share your thoughts.